fracture toughness K_{R25} of at least 91.5 ksi$\sqrt{in}$ when the alloy is in a cold worked, naturally aged temper.

5. (Amended) The aluminum alloy of claim 1, including a dispersoid selected from the group consisting of chromium, vanadium, titanium and zirconium and mixtures thereof in an amount up to about 0.6 wt.%.

6. (Amended) The aluminum alloy of claim 1, including a dispersoid selected from the group consisting of manganese, nickel, iron, hafnium, scandium and mixtures thereof in an amount up to about 1.0 wt.%.

7. (Amended) The aluminum alloy of claim 1, including a first dispersoid selected from the group consisting of chromium, vanadium, titanium, zirconium and mixtures thereof in an amount up to about 0.6 wt.% and a second dispersoid selected from the group consisting of manganese, nickel, iron, hafnium, scandium and mixtures thereof in an amount of from about 0.04 to 1.0 wt.%.

8. (Amended) The aluminum alloy of claim 1, including other alloying elements selected from the group consisting of zinc, silver, silicon and mixtures thereof in an amount up to about 2.0 wt.%.

12. (Four times amended) An aluminum alloy consisting essentially of copper, magnesium and lithium in the form of a solid solution, the lithium content being in an amount of from 0.01 to 0.99 wt %, effective to avoid formation of an Al_3Li phase, wherein the alloy comprises clusters of atoms of solute and the alloy is capable of attaining a fracture toughness K_{R25} of at least 91.5 ksi$\sqrt{in}$ when the alloy is in a cold worked, naturally aged temper, and wherein the copper and magnesium weight percent values fall within a closed area on a graph with wt % copper on the x-axis and wt % magnesium on the y-axis, said closed area being bounded by generally straight lines joining the following points:

POINT 1 = 3 Cu, 0.6 Mg
POINT 2 = 4.28 Cu, 0.6 Mg
POINT 3 = 3.7 Cu, 2 Mg
POINT 4 = 3 Cu, 2 Mg
and back to POINT 1.

D4

19. (Amended) The aluminum alloy of claim 12, including a dispersoid selected from the group consisting of chromium, vanadium, titanium and zirconium and mixtures there in an amount up to about 0.6 wt.%.

20. (Amended) The aluminum alloy of claim 12, including a dispersoid selected from the group consisting of manganese, nickel, iron, hafnium, scandium and mixtures there in an amount up to about 1.0 wt.%.

21. (Amended) The aluminum alloy of claim 12, including a first dispersoid selected from the group consisting of chromium, vanadium, titanium, zirconium and mixtures thereof in an amount up to about 0.6 wt.% and a second dispersoid selected from the group consisting of manganese, nickel, iron, hafnium, scandium and mixtures thereof in the amount of from about 0.04 to 1.0 wt.%.

22. (Amended) The aluminum alloy of claim 12, including other alloying elements selected from the group consisting of zinc, silver, silicon and mixtures thereof in an amount up to about 2.0 wt.%.

D5

27. (Twice amended) The aluminum alloy of Claim 12, wherein said lithium content comprises a maximum of 0.8 wt % and where interaction of lithium ions in the solid solution gives rise to formation of the clusters of atoms of solute which provide fatigue resistant alloys.

Please add Claims 28-37 as follows:

D6

28. (New) The aluminum alloy of claim 1, wherein the Mg comprises at least about 1 wt % of the alloy.

29. (New) The aluminum alloy of claim 1, wherein the alloy further comprises Mn as a purposely added alloying addition in an amount up to about 1 wt %.

30. (New) The aluminum alloy of claim 1, wherein the alloy is substantially free of Ag.

31. (New) The aluminum alloy of claim 1, wherein the alloy is substantially free of Zn.

32. (New) The aluminum alloy of claim 1, wherein the alloy is substantially free of Sc.

33. (New) The aluminum alloy of claim 12, wherein the Mg comprises at least about 1 wt % of the alloy.